INDEX

HIGH TEMPERATURE

Volume 7, Numbers 1-6, 1969

HIGH TEMPERATURE
Volume 7, Numbers 1-6, 1969
(A translation of Teplofizika Vysokikh Temperatur)

A

Aberkova, D. M. - 721
Abramova, Yu. Yu. - 757
Aivazov, A. A. - 1137
Aivazov, M. I. - 830
Akin'shin, L. I. - 780
Akulina, D. K. - 993
Amenitskii, A. N. - 974
Anisimov, V. M. - 340
Antipov, V. I. - 676
Artym, R. I. - 587
Artyushkov, E. V. - 31
Ashin, M. I. - 574
Asinovskii, É. I. - 203
Avarbé, R. G. - 1021
Avramenko, V. B. - 12
Azalbert, J. P. - 1091

B

Babin, L. V. - 516
Baibuz, V. F. - 223
Bakanovich, G. I. - 303
Bakeev, A. A. - 1119
Balagurov, A. Ya. - 516
Barabanova, L. G. - 534
Barsukov, V. I. - 388
Batalov, V. S. - 1133
Batenin, V. M. - 196, 367, 553, 776
Bazarov, G. P. - 598
Beilis, I. I. - 568
Belotserkovskii, O. M. - 476
Belov, V. A. - 388
Bezrodnyi, M. K. - 443
Biberman, L. M. - 183, 476, 543, 724, 767
Bityurin, V. A. - 903
Bogdanov, F. F. - 74
Bogdanova, S. S. - 522
Boikov, G. P. - 739
Bolgar, A. S. - 226
Borok, A. M. - 919
Boughner, R. E. - 489
Boykov, G. P. - 531
Bronin, S. Ya. - 476
Buchel'nikova, N. S. - 794, 1004
Buleev, N. I. - 96
Burns, R. C. - 489
Butuzov, A. I. - 443

C

Chekhovskoi, V. Ya. - 167, 239, 610
Chertoprud, V. E. - 1009
Chinnov, V. F. - 367, 776
Ch'uang, R. K. - 780
Chulkov, B. A. - 433
Chursin, M. M. - 881

D

Danilin, V. S. - 294
Danilova, T. G. - 1131
Davydov, B. B. - 12
Degtyarev, L. M. - 427
Deich, M. E. - 294
Derevshchikov, V. A. - 1122
Dmitriev, V. D. - 398
Domashnev, I. A. - 830
Donskoi, A. V. - 421
Dorodnov, A. M. - 881
Drapkin, B. M. - 634
Dreitser, G. A. - 1141
Dresvin, S. V. - 421, 580
Drozdov, S. A. - 114
Druzhinin, V. P. - 60, 331
Dubner, V. M. - 522
Dubrovina, É. N. - 671
Duganov, V. V. - 1147
Dukarskii, S. M. - 1077
D'yakonova, L. V. - 955
Dymov, B. K. - 167, 239

E

Egorov, A. M. - 726, 949
Emyashev, A. V. - 167
Érgardt, N. N. - 175

F

Fabrikant, V. A. - 974
Fafurin, A. V. - 253, 1054
Fainzil'berg, S. N. - 443
Favorskii, A. P. - 427
Fedorov, V. I. - 247, 732, 960
Fesenko, V. V. - 226
Filinnov, Yu. N. - 704
Filinov, V. S. - 216
Filippov, G. A. - 171
Filippov, L. P. - 342
Fomenko, A. F. - 801
Fomin, V. A. - 816
Fomin, V. N. - 476
Frantseva, K. E. - 52

G

Galaktionov, I. I. - 78, 1127
Galin, N. M. - 897
Gentsvein, F. - 981
Gerashchenko, O. A. - 300
German, V. O. - 120
Glazov, V. M. - 1137
Glushkov, I. S. - 208
Gogotsi, G. A. - 465
Gokhstein, Ya. P. - 965
Gol'dfarb, V. M. - 421, 558
Golov, G. G. - 103
Golubyak, L. S. - 955
Goncharenko, L. F. - 320
Goncharova, G. I. - 6
Goncharova, V. S. - 1105
Gorbunova, N. I. - 350
Gordon, A. R. - 346
Gorelov, V. A. - 17
Gorelova, M. A. - 17
Gorshkov, V. A. - 1
Gorshkova, L. D. - 1
Goulard, R. - 489
Grechikhin, L. I. - 303
Grigor'ev, V. S. - 1061
Gruzdev, V. A. - 65
Gurevich, A. V. - 794, 1004
Gurvich, L. V. - 1083
Guzei, V. M. - 320

I

Igamberdyev, A. T. - 1061
Ivanov, B. I. - 726
Ivanov, B. M. - 834
Ivanov, O. S. - 1125
Ivanovskii, M. N. - 433
Ivashkin, A. B. - 881
Izosimov, V. G. - 1141

J

Jacquemin, J. P. - 1100

K

Kagan, D. N. - 328, 525, 729
Kairov, É. A. - 272
Kalinin, E. K. - 1141
Kantsedal, V. P. - 789, 997
Karpukhin, V. T. - 208
Kas'yanov, V. A. - 724
Katashinskii, A. S. - 338
Kerimov, R. V. - 1145
Khaikin, R. A. - 743, 965
Khailov, V. M. - 260
Kharin, B. E. - 863
Kharlamov, A. G. - 69
Khaustovich, G. P. - 325
Khazen, A. M. - 806
Khegedyush, M. - 981
Khokhlov, L. K. - 307, 694
Kholopov, G. K. - 232, 398
Khoshev, Yu. M. - 801
Kil'dyushova, L. A. - 17
Kilin, V. S. - 239
Kirdyashkin, A. G. - 871
Kir'enin, I. A. - 1105
Kirichenko, P. I. - 624
Kirillov, V. V. - 447
Kislyi, P. S. - 955
Kivshik, A. F. - 726, 949
Klubnikin, V. S. - 421, 580
Kobylkin, A. N. - 1125
Kobzev, G. A. - 511, 941
Kolesnichenko, E. G. - 223
Komendantov, A. S. - 1070
Konakh, V. F. - 1115
Kondrat'ev, E. A. - 739
Konenko, O. R. - 359
Kon'kov, A. A. - 126
Kononenko, V. I. - 243
Konovalov, A. E. - 83, 563
Konyaev, B. A. - 962
Koptev, V. M. - 694
Korneev, N. E. - 153
Korobkin, V. V. - 325, 719
Korovkina, T. D. - 78, 1127
Korshakov, A. I. - 74
Korsunskii, A. M. - 750
Koshelyaev, E. M. - 459
Kosova, R. V. - 936
Kostygova, I. E. - 558
Koval'chuk, D. S. - 338
Kovalev, A. I. - 617
Kovalev, I. I. - 346
Kovalev, S. A. - 439, 537, 746, 1070
Kovner, D. S. - 1147
Kozlov, N. P. - 881
Kraev, O. A. - 65
Krainova, I. F. - 159
Krasnoshchekov, E. A. - 856, 1061
Krasnov, K. S. - 333, 1131
Kravchuk, L. V. - 465
Krivenkov, G. V. - 1113
Krukovskii, V. K. - 314
Kruzhilin, N. A. - 939
Krymasov, V. N. - 662
Kudashev, V. I. - 841
Kudelya, P. P. - 443
Kudryavtsev, V. S. - 380
Kufa, É. N. - 598
Kukota, Yu. P. - 120
Kuraeva, I. V. - 856
Kurdymov, S. P. - 427
Kurganov, V. A. - 968
Kuriat, R. I. - 465
Kuznetsov, Yu. N. - 638

L

Labuntsov, D. A. - 888, 1065
Lagar'kov, A. N. - 476
Lakh, V. I. - 750
Lanshov, V. N. - 598
Laricheva, M. A. - 1073
Latyev, L. N. - 610
Lebedev, S. V. - 951
Lebedev, V. V. - 676
Leont'ev, A. I. - 253, 654, 871, 1054
Levina, I. N. - 1014
Lin'kova, S. A. - 179
Litvinov, V. D. - 344
Lobastov, Yu. S. - 323
Logunov, A. V. - 617
Lopatskii, G. S. - 721
Losev, S. A. - 944
Lukin, B. V. - 951
Luk'yanenko, O. P. - 682
Luk'yanov, G. A. - 558, 785
Luzhnova, M. A. - 283
Lyubimov, G. A. - 120, 903
Lyusternik, V. E. - 335

M

Machuev, V. I. - 732, 960, 976
Magomedov, Ya. B. - 157
Malikov, M. M. - 519
Mal'sagov, A. U. - 157
Marmer, É. N. - 534
Mastryukov, B. S. - 272
Matveev, A. B. - 587
Metelin, Yu. P. - 287
Mikhalevskii, V. D. - 78
Minaev, P. V. - 196, 553
Min'ko, L. Ya. - 12
Mironov, B. P. - 1054
Mironovich, R. Ya. - 96
Mitin, R. V. - 789, 997
Mnatsakanyan, A. Kh. - 353
Morozov, V. P. - 384
Moskvin, Yu. V. - 704
Mostinskii, I. L. - 348, 1073
Muchnik, G. F. - 346
Mukhachev, G. A. - 287
Muranevich, A. Kh. - 830
Muratova, T. M. - 888, 1065
Murovannaya, S. G. - 534

N

Namitokov, K. K. - 469
Naparotovich, A. P. - 757
Narinskii, D. A. - 394
Nechaev, Yu. I. - 993
Nedospasov, A. V. - 208
Nefedov, A. P. - 447, 574
Neiland, V. Ya. - 126
Nelson, H. F. - 489
Nemchenko, V. F. - 408
Nikashin, V. A. - 1110
Nikitin, K. A. - 314
Nikitin, P. V. - 253
Nikolaev, V. M. - 126
Nikolaeva, V. A. - 236
Nikol'skaya, T. A. - 1021
Nikol'skii, S. S. - 812, 1014
Norman, G. É. - 216, 767
Novikov, I. I. - 65, 1139
Novitskii, L. A. - 175, 925

O

Odintsov, A. A. - 65
Ogurtsova, N. N. - 200
Okhotin, A. S. - 1137

Olevinskii, K. K. - 39
Osipova, M. N. - 736
Osipova, V. A. - 736

P

Pashkov, L. T. - 915
Pavlov, Yu. I. - 153
Pavlovskaya, T. G. - 1031
Peletskii, V. É. - 60, 331
Pereletov, I. I. - 694
Petrakiev, A. - 981
Petrov, V. A. - 109, 167, 236, 239
Petukhov, B. S. - 863, 1070
Petukhov, G. V. - 785
Pigal'skaya, L. A. - 628
Pikashov, V. S. - 300
Pioro, L. S. - 300
Plastinin, Yu. A. - 126
Plyshevskii, M. A. - 516
Poberezhskii, L. P. - 23
Podmoshenskii, I. V. - 1, 78, 200
Polyaev, V. M. - 972
Polyakov, A. F. - 537
Polyakov, Yu. A. - 114, 976
Popov, V. I. - 320
Popov, Yu. A. - 88
Prikhodov, V. Yu. - 979
Prishchepov, V. P. - 949
Privalov, I. M. - 243
Prokhorenko, V. Ya. - 750
Protopopov, V. S. - 856, 1061
Pushkarev, G. P. - 320
Pyatnitskii, L. N. - 325, 719

R

Raikhbaum, Ya. D. - 283
Rakhovskii, V. I. - 568, 1001
Ratushnyak, E. A. - 750
Rautbort, A. E. - 951
Ravvina, L. P. - 743
Reshetnikov, N. N. - 881
Rinkevichyus, B. S. - 974
Rogachev, A. P. - 307, 694
Roizman, D. Kh. - 263
Romanenko, P. N. - 876
Romashin, A. G. - 604
Roshchupkin, V. V. - 65
Rossievskii, G. I. - 1105
Rovinskii, R. E. - 192, 1119
Rozhdestvenskii, I. B. - 39
Rtishcheva, N. A. - 46
Rubinshtein, G. M. - 243
Rukman, G. I. - 1110
Rumyantseva, I. A. - 153
Rusin, A. D. - 58
Ryabchenko, G. V. - 300
Rybchinskaya, G. B. - 439, 746

S

Sakharov, V. K. - 1110
Salimov, R. A. - 794, 1004
Sal'nikov, L. A. - 346
Saltanov, G. A. - 453
Samarskii, A. A. - 427
Samsonov, G. V. - 408
Samuilov, E. V. - 155, 763
Savchenko, V. A. - 411, 1026
Savvatimskii, A. I. - 951
Scaricabarozzi, R. - 1091
Seleznev, L. I. - 171
Semenchenkov, A. T. - 1122
Semenov, A. M. - 591
Semenov, G. A. - 52
Semenov, Yu. P. - 876
Serdyuk, L. S. - 841
Serednitskaya, M. A. - 823
Sergeev, V. M. - 511, 941
Serov, E. P. - 915
Seryakov, K. I. - 151, 1083
Shabashov, V. I. - 203
Shabur, V. N. - 338, 384
Shanin, V. K. - 294
Shchegolev, G. M. - 120
Shchukin, V. K. - 416
Sheindlin, A. E. - 109, 236
Sheinin, B. I. - 394
Shelemina, V. M. - 200
Shestakov, E. N. - 610
Shevelev, V. P. - 39, 763
Shirokova, I. P. - 1119
Shpil'rain, É. É. - 159, 328, 411, 525, 729, 816, 1026
Shumyatskii, B. Ya. - 307, 694
Shuravenko, N. A. - 671
Shuvalov, V. A. - 806
Sinkevich, O. A. - 318, 1047
Skorokhodov, V. B. - 531
Skripak, V. N. - 403
Skripov, V. P. - 671
Smekhov, G. D. - 944
Smirnov, B. P. - 163
Smirnov, V. P. - 646
Sobolev, A. P. - 192
Sokolov, V. S. - 427
Sokolovskii, I. N. - 953
Sokol'skii, A. G. - 307, 694
Solov'ev, A. N. - 165
Solov'eva, V. V. - 469
Sorokin, A. G. - 342, 433
Spiridonov, É. G. - 743
Stadnyk, B. I. - 750
Stepanchuk, V. F. - 453
Stepanov, A. M. - 1001
Stognii, N. I. - 443
Struchkov, A. I. - 1122
Styrikovich, M. A. - 1073
Subbotin, V. I. - 433
Sukhov, A. V. - 972
Sukomel, A. S. - 1145
Suksov, I. I. - 373
Surinov, Yu. A. - 682
Surov, N. S. - 276
Suslov, A. A. - 1083

T

Tarasov, V. K. - 1110
Tatevskii, V. M. - 58
Testov, V. G. - 323
Tetel'baum, S. D. - 528
Timoshinin, V. S. - 333
Timrot, D. L. - 823
Timukhina, M. M. - 96
Titova, I. S. - 338
Traktueva, S. A. - 823
Trekhov, E. S. - 801
Trelin, Yu. S. - 1035, 1139
Tret'yachenko, G. N. - 465
Trukhanova, L. N. - 342
Tsalko, E. A. - 654
Tsiklauri, G. V. - 294, 453
Tsitelauri, N. N. - 155
Tsvetkov, F. F. - 1145
Tsyganova, T. A. - 1139
Tsykalo, A. L. - 958
Tverdokhlebov, V. I. - 947

U

Ulybin, S. A. - 852
Upadkhaya, G. Sh. - 408
Usenko, V. I. - 443

V

Vafin, F. M. - 686
Varasseur, C. - 1091
Vargaftik, N. B. - 848
Vasil'ev, I. N. - 1035
Vasil'eva, I. A. - 447, 574, 936, 985
Vasilevskaya, Yu. D. - 848
Vavasseur, C. - 1100
Vidin, Yu. V. - 739

Vilenskii, V. D. - 646, 863
Vinnikova, A. N. - 109, 236
Vishnevskii, I. - 981
Vishnevskii, I. I. - 403
Vizel', Ya. M. - 348
Volyak, L. D. - 340
Vorob'ev, B. A. - 46
Vorob'ev, V. S. - 183, 543
Voronkov, G. V. - 739
Voropaev, A. A. - 580
Voropaev, A. V. - 421
Vörös, T. - 981
Voskresenskii, A. K. - 876

Y

Yakovlev, A. T. - 169
Yakubov, I. T. - 183, 543, 939
Yalovega, N. V. - 472, 753
Yatsenko, S. P. - 243
Yurchak, R. P. - 163

Z

Zaklyaz'minskii, L. A. - 427
Zaverukha, O. V. - 955
Zeigarnik, Yu. A. - 344
Zettwoog, P. - 1091, 1100
Zhorov, G. A. - 1031
Zykov, V. A. - 1039

TABLE OF CONTENTS

HIGH TEMPERATURE
Volume 7, Numbers 1-6, 1969
(A translation of Teplofizika Vysokikh Temperatur)

Volume 7, Number 1 January-February, 1969

	Engl.	Russ.
Spectroscopic Investigations of the Plasma of a High-Power H-Pinched Discharge—L. D. Gorshkova, V. A. Gorshkov, and I. V. Podmoshenskii	1	1
Radiative Cooling of Dense Hydrogen Plasma—G. I. Goncharova	6	6
Plasma Formation near an Electrode during a High-Current Pulsed Discharge with Separate Flares. II—V. B. Avramenko, B. B. Davydov, and L. Ya. Min'ko	12	13
Measurement of Air Conductivity behind Incident and Reflected Shock Waves by an Electrode Method—M. A. Gorelova, V. A. Gorelov, and L. A. Kil'dyushova	17	18
Determination of Electrical Conductivity Profile from the Changes in Circuit Parameters—L. P. Poberezhskii	23	25
Stability of Transverse Oscillations in a Quasi-One Dimensional Flow of a Conducting Gas—E. V. Artyushkov	31	34
Composition and Thermodynamic Functions of a Reacting Gaseous or Heterogeneous System—I. B. Rozhdestvenskii, K. K. Olevinskii, and V. P. Shevelev	39	42
Method of Calculating the Equilibrium Compositions of Reaction Products by Moving along the Limiting Equilibrium Surface—N. A. Rtishcheva and B. A. Vorob'ev	46	49
Mass-Spectrometer Study of the Evaporation of Certain Vanadium Oxides—K. E. Frantseva and G. A. Semenov	52	55
Heat of Formation of the Radical BCl_2—A. D. Rusin and V. M. Tatevskii	58	62
Experimental Determination of the Integral Hemispherical Emissivity of Molybdenum at High Temperatures—V. É. Peletskii and V. P. Druzhinin	60	65
Thermophysical Properties of Liquid Alkali Metals at High Temperatures—I. I. Novikov, V. A. Gruzdev, O. A. Kraev, A. A. Odintsov, and V. V. Roshchupkin	65	71
The Thermal Conductivity of Polycrystalline Beryllium Oxide—A. G. Kharlamov	69	75
An Investigation into the Thermal Conductivity of Soft Steel and Aluminum Foil Insulation in Air—A. I. Korshakov and F. F. Bogdanov	74	81
Carbon Dioxide Concentration and Temperature Measurement behind a Shock Wave by Means of Infrared Band Spectra—I. I. Galaktionov, T. D. Korovkina, V. D. Mikhalevskii, and I. V. Podmoshenskii	78	85
Heat Fluxes to the Electrodes under the Conditions of a High-Current Discharge—A. E. Konovalov	83	91
Heat Exchange by Radiation in Scattering Media—Yu. A. Popov	88	97
Simplified Formulas for the Turbulent-Exchange Coefficients in Fluid Flow—N. I. Buleev, M. M. Timukhina, and R. Ya. Mironovich	96	105
Nonstationary Thermal Conductivity of a Thin Rod with a Mobile End Face and Third-Order Boundary Conditions on the Lateral Surface—G. G. Golov	103	113
Measurement Method and Experimental Unit for Determination of the Integral Normal Radiating Power of Construction Materials in the Temperature Interval from 1200 to 3000°K—A. N. Vinnikova, V. A. Petrov, and A. E. Sheindlin	109	121

Investigation of the Operation of a Film-Type Heat Collector with Insulation in Transient Processes—Yu. A. Polyakov and S. A. Drozdov 114 127
Use of a Flow of Neutral Gases to Protect Electrodes in MHD Devices—V. O. German, Yu. P. Kukota, G. A. Lyubimov, and G. M. Shchegolev 120 133

REVIEWS
Problems of Radiant Transfer in Hypersonic Aerodynamics—A. A. Kon'kov, V. Ya. Neiland, V. M. Nikolaev, and Yu. A. Plastinin 126 140

BRIEF COMMUNICATIONS
Thermodynamic Stability of a Dense Equilibrium Plasma—K. I. Seryakov 151 165
Investigation of Plasmoid Produced by Focused Laser Beam—N. E. Korneev, Yu. I. Pavlov, and I. A. Rumyantseva 153 167
Collision Integrals for the Morse Potential—E. V. Samuilov and N. N. Tsitelauri 155 168
The Thermal Conductivity of the Semiconducting Compound $CuSbSe_2$ in the Solid and Liquid States—A. U. Mal'sagov and Ya. B. Magomedov 157 170
Experimental Study of the Thermal Conductivity of Potassium and Sodium-Potassium Alloys—É. É. Shpil'rain and I. F. Krainova 159 172
Thermal Conductivity and Lorentz Number of Indium in the Solid and Liquid States—R. P. Yurchak and B. P. Smirnov 163 176
Temperature Dependence of the Electrical Resistivity of Liquid Metals—A. N. Solov'ev 165 177
Integral Semispherical Emissivity of Pyrolytic Silicon Carbide—V. A. Petrov, V. Ya. Chekhovskoi, B. K. Dymov, and A. V. Emyashev 167 179
Calculation of Critical Conditions in the Construction of Equations of State for Real Gases—A. T. Yakovlev 169 180
The Kinetic Equation of Phase Transitions—G. A. Filippov and L. I. Seleznev 171 182
New Instruments for Thermophysical Research—L. A. Novitskii and N. N. Érgardt 175 185

CHRONICLES
Sixth Riga Congress on Magnetohydrodynamics—S. A. Lin'kova 179 188

Volume 7, Number 2 March-April, 1969

PLASMA RESEARCH
Nonequilibrium Low-Temperature Plasma. III. Electron Concentration in Nonequilibrium Plasma—L. M. Biberman, V. S. Vorob'ev, and I. T. Yakubov . . . 183 193
Calculation of the Parameters of an Induced High-Frequency, High-Pressure Discharge—R. E. Rovinskii and A. P. Sobolev 192 203
Axial Temperature in an Electric Arc in Argon—V. M. Batenin and P. V. Minaev 196 208
Method for Determining the Energy Luminosity of a Plasma from Experimental Data on Energy Balance—N. N. Ogurtsova, I. V. Podmoshenskii, and V. M. Shelemina . . . 200 213
Experimental Study of the Electrical and Thermal Conductivity of Air Plasma—É. I. Asinovskii and V. I. Shabashov 203 217
Current Distribution in an E × H Discharge with Sectionalized Electrodes for Nonequilibrium Conductivity of the Plasma—I. S. Glushkov, V. T. Karpukhin, and A. V. Nedospasov 208 223

THERMOPHYSICAL PROPERTIES OF SUBSTANCES
Investigations of Phase Transitions by a Monte-Carlo Method—G. É. Norman and V. S. Filinov 216 233
The Temperature Dependence of Model Intermolecular Interaction Potentials—E. G. Kolesnichenko and V. F. Baibuz 223 241
Study of the Evaporation Rates of the Carbides of Titanium, Zirconium, Hafnium, Niobium, and Tantalum at High Temperatures—V. V. Fesenko and A. S. Bolgar . . 226 244
Emittance of a Specular Tubular Cavity with a Slit—G. K. Kholopov 232 252

Integral Normal Emissivity of Tantalum and Hafnium Carbides over the Temperature Range 1300-3000°K—A. E. Sheindlin, V. A. Petrov, A. N. Vinnikova, and V. A. Nikolaeva 236 257
The Integrated Hemispherical Emissivity of Zirconium Carbide—V. A. Petrov, V. Ya. Chekhovskii, B. K. Dymov, and V. S. Kilin 239 260
Viscosity and Electrical Resistivity of Liquid Aluminum—V. I. Kononenko, S. P. Yatsenko, G. M. Rubinshtein, and I. M. Privalov 243 265
Thermal Conductivity of Liquid Antimony Chalcogenides—V. I. Fedorov 247 269
HEAT EXCHANGE, MECHANICS OF LIQUIDS, GASES, AND PLASMAS
Turbulent Boundary Layer in the Inlet Section of a Tube with Nonisothermal Blast—A. I. Leont'ev, A. V. Fafurin, and P. V. Nikitin 253 276
Method of Graphical Interpolation of Results of Calculations of Chemically Unstable Flows in Nozzles—V. M. Khailov 260 284
Pulsating Laminar Flow of a Liquid in Circular Tubes—D. Kh. Roizman 263 288
Radiant Heat Transfer in a System of Solid, Nongray Bodies Separated by a Transparent Medium—B. S. Mastryukov and É. A. Kairov 272 299
Experimental Investigation of Distribution of Parameters in One-Phase and Two-Phase Subsonic Plasma Jets—N. S. Surov 276 304
Kinetics of Metal Particle Evaporation in an Arc Plasma—M. A. Luzhnova and Ya. D. Raikhbaum 283 313
Condensation in a Supersonic Stream—G. A. Mukhachev and Yu. P. Metelin 287 318
Investigation of the Flow of Wet Steam in Axisymmetric Laval Nozzles over a Wide Range of Moisture Content—M. E. Deich, V. S. Danilin, G. V. Tsiklauri, and V. K. Shanin 294 327
METHODS OF EXPERIMENTAL INVESTIGATION AND MEASUREMENT
Narrow-Angle, Total Radiation Radiometer Probe for Determination of the Radiant Characteristics of Flame—V. S. Pikashov, O. A. Gerashchenko, L. S. Pioro, and G. V. Ryabchenko 300 334
Spectroscopic Methods of Determining the Concentration of Charged Particles under the Conditions of a Pulse Plasma Generator—G. I. Bakanovich and L. I. Grechikhin 303 338
HIGH TEMPERATURE APPARATUS
Production of High-Temperature Combustion Products for Thermoelectric Plants with a Magnetohydrodynamic Generator—B. Ya. Shumyatskii, L. K. Khokhlov, A. G. Sokol'skii, and A. P. Rogachev 307 342
NEW MATERIALS FOR THERMOPHYSICAL RESEARCH
Covering Graphite with Niobium from a Vapor-Gas Mixture—K. A. Nikitin and V. K. Krukovskii 314 349
BRIEF COMMUNICATIONS
Possibility of a Newtonian Sound Velocity in a Plasma—O. A. Sinkevich 318 354
Thermal Stability of a dc Plasmatron Arc—G. P. Pushkarev, V. I. Popov, L. F. Goncharenko, and V. M. Guzei 320 355
Microwave Investigation of Relaxation Phenomena in Shock-Heated Argon Plasma—Yu. S. Lobastov and V. G. Testov 323 358
Effect of Aperture on Plasma Parameters Determined during Diagnostics by the Scattering Method—L. N. Pyatnitskii, G. P. Khaustovich, and V. V. Korobkin 325 359
Experimental Investigation of the Enthalpy of Liquid Rubidium and Cesium in the Temperature Range from 400 to 1350°K—É. É. Shpil'rain and D. N. Kagan 328 362
Total Hemispherical Emittance of Rhenium in the Temperature Range from 1200 to 2800°K—V. É. Peletskii and V. P. Druzhinin 331 364
Molecular Constants of Scandium, Yttrium, and Lanthanum Halides—K. S. Krasnov and V. S. Timoshinin 333 365

Equation of Viscosity of Compressed Gaseous and Liquid Hydrogen—V. E. Lyusternik. 335 367
Calculation of the Entropy and Gibbs Function of Pyramidal Molecules —V. N. Shabur, A. S. Katashinskii, I. S. Titova, and D. S. Koval'chuk 338 369
Experimental Determination of the Pressure of Saturated Lithium Vapor —V. M. Anisimov and L. D. Volyak 340 371
Thermal and Electrical Conductivities and Radiative Characteristics of Rhodium at High Temperatures—A. G. Sorokin, L. N. Trukhanova, and L. P. Filippov... 342 372
Boiling of Liquid Alkali Metals in Tubes—Yu. A. Zeigarnik and V. D. Litvinov 344 374
Approximate Equations for the Net Radiation Flux between Two Infinite Planes —G. F. Muchnik, L. A. Sal'nikov, A. R. Gordon, and I. I. Kovalev 346 376
Mass Transfer during Condensation of Cesium Vapor from a Moving Mixture with Argon—I. L. Mostinskii and Ya. M. Vizel' 348 378

CHRONICLE
Thermophysics of the Properties of Substances at High Temperatures —N. I. Gorbunova 350 381

Volume 7, Number 3 May-June, 1969

Electron Energy Balance in Inert Gas-Alkali Metal-Nitrogen Mixtures —A. Kh. Mnatsakanyan 353 385
Diffusion Current Electron Cooling in a Weakly-Ionized, Decaying Plasma —O. R. Konenko. 359 392
Diagnostics of the Plasma of a Low-Current ARC Discharge by Means of a Light Probe (II)—V. M. Batenin and V. F. Chinnov 367 401
Positive Column of an Electric ARC in a Gas Stream—I. I. Suksov 373 408
A Spectroscopic and Photoelectric Investigation of Pulsed Discharges in Vacuum —V. S. Kudryavtsev 380 416
Thermodynamical Functions of SnH_4 and its Deutero-Derivatives—V. N. Shabur and V. P. Morozov. 384 421
Calculation of Thermal Conductivity of a Chemically Reacting Gaseous Mixture —V. I. Barsukov and V. A. Belov 388 426
Effective Thermal Conductivity of Steel Foil Insulation—D. A. Narinskii and B. I. Sheinin 394 433
Spectral and Integral Emissivity of Molybdenum—V. D. Dmitriev and G. K. Kholopov .. 398 438
Radiative Heat Transfer in Polycrystalline Corundum—I. I. Vishnevskii and V. N. Skripak 403 444
Temperature Dependence of the Electrical Resistivity and Thermal EMF of Niobium and Titanium Carbide Alloys in their Homogeneity Range—G. V. Samsonov, G. Sh. Upadkhaya, and V. F. Nemchenko 408 449
Influence of a Small Admixture of Sodium on the Resistivity of Lithium —V. A. Savchenko and É. É. Shpil'rain 411 453
Gradient Method in the Determination of Heat Flow in the Vicinity of a Porous Surface —V. K. Shchukin 416 459
Thermal and Gas-Dynamical Characteristics of an ARC Discharge in a Longitudinal Current of Argon—A. V. Voropaev, V. M. Gol'dfarb, A. V. Donskoi, S. V. Dresvin, and V. S. Klubnikin 421 464
Development of Local Perturbations of the Electrical Conductivity in a Flow of Weakly Conducting Gas in the Presence of a Magnetic Field—L. M. Degtyarev, L. A. Zaklyaz'minskii, S. P. Kurdymov, A. A. Samarskii, V. S. Sokolov, and A. P. Favorskii 427 471
Interdiffusion during the Condensation of Potassium Vapor from a Gas Mixture —M. N. Ivanovskii, V. P. Sorokin, V. I. Subbotin, and B. A. Chulkov 433 479

	Engl.	Russ.
Theoretical Study of Growth of a Single Drop of an Alkali Metal by Condensation of Saturated Vapors on It—G. B. Rybchinskaya and S. A. Kovalev	439	486
Experimental Data on the Boiling of Freon-12 and Water during Free Motion under Inertial Acceleration Conditions—A. I. Butuzov, S. N. Fainzil'berg, M. K. Bezrodnyi, N. I. Stognii, P. P. Kudelya, and V. I. Usenko	443	490
Influence of a Thermal Boundary Layer in a Channel on the Measurement of the Temperature of a Plasma Jet by the Reversal of Spectrum Method—I. A. Vasil'eva, V. V. Kirillov, and A. P. Nefedov	447	495
Choice of the Optimal Working Parameters of a Liquid-Metal MHD Apparatus —V. F. Stepanchuk, G. A. Saltanov, and G. V. Tsiklauri	453	502
Optimal Parameters of Tubular Radiation Emitters with Profiled Fins—E. M. Koshelyaev.	459	508
Heat Resistance of Refractory Materials in a Gas Flow—G. A. Gogotsi, L. V. Kravchuk, R. I. Kuriat, and G. N. Tret'yachenko	465	515
Resistance of Aluminum Oxide-Based Ceramics to an Electric Arc—K. K. Namitokov and V. V. Solov'eva	469	520
Level Indicator for Hot Conducting Liquids—N. V. Yalovega	472	524
REVIEWS		
Hypersonic Gas Flow around a Blunt Object and Heating of the Object, with an Account of Radiation—O. M. Belotserkovskii, L. M. Biberman, S. Ya. Bronin, A. N. Lagar'kov, and V. N. Fomin	476	529
Flow of Radiating Gas around a Probe Entering a Planetary Atmosphere—R. Goulard, R. E. Boughner, R. C. Burns, and H. F. Nelson	489	542
BRIEF COMMUNICATIONS		
Calculation of Photoionization Cross Sections—G. A. Kobzev and V. M. Sergeev	511	566
Fluctuations of the Discharge Channel in Tubular Flash Bulbs—L. V. Babin, A. Ya. Balagurov, and M. A. Plyshevskii	516	570
Rotation of the Gas in an Electric Arc in a Longitudinal Magnetic Field—M. M. Malikov	519	572
Shear and Dilatational Viscosity of a Partially Ionized Gas—S. S. Bogdanova and V. M. Dubner	522	574
Investigation of the Thermodynamic Properties of Cesium Fluoride and Barium in the Temperature Range 400°-1300°K—É. É. Shpil'rain and D. N. Kagan	525	577
Effect of the Properties of the Working Body on the Thermodynamic Parameters of Magnetohydrodynamic Units—S. D. Tetel'baum	528	579
Laws Governing Regular Thermal Conditions in Solid Bodies with Radiative Heating, with a Variable Temperature of the Radiation Source—V. B. Skorokhodov, and G. P. Boykov	531	581
High-Temperature Thermal Conductivity of Pressed Tungsten Filament Wastes —L. G. Barabanova, S. G. Murovannaya, and É. N. Marmer	534	583
CHRONICLES		
International Summer School "Heat and Mass Transfer in the Turbulent Boundary Layer" —A. F. Polyakov and S. A. Kovalev	537	586

Volume 7, Number 4 July-August, 1969

Nonequilibrium Low-Temperature Plasma. IV. The Ionization and Recombination Functions—L. M. Biberman, V.S. Vorob'ev, and I. T. Yakubov	543	593
Continuous Radiation from a Low-Temperature Argon Plasma—V. M. Batenin and P. V. Minaev	553	604
Parameters of a Hydrogen Plasma in a Supersonic Spherical Source—V. M. Gol'dfarb, I. E. Kostygova, and G. A. Luk'yanov	558	610

Engl./Russ.

Effect of Radiative Transfer on the Relaxation Length in a Closed Cycle MHD Generator —L. M. Biberman and V. A. Kas'yanov 724 783
Optical-Radiation Study of the Geometrical and Temporal Parameters of a Plasma Waveguide—A. F. Kivshik, A. M. Egorov, and B. I. Ivanov 726 785
Thermodynamic Analysis of the Systems CsF – Cs and Ba – Cs in the Condensed State —É. F. Shpil'rain and D. N. Kagan 729 787
The Thermal Conductivity of Liquid Gallium and Tin Tellurides—V. I. Fedorov and V. I. Machuev 732 791
Complex Methods of Determining Temperature-Dependent Thermophysical Properties under Self-Similar Conditions—M. N. Osipova and V. A. Osipova 736 794
Heat Distribution Laws in Finite Bodies and their Application to Heating by an Overall Heat Flux—Yu. V. Vidin, G. V. Voronkov, E. A. Kondrat'ev and G. P. Boikov 739 795
Measurement of the High Temperature Electrical Conductivity of Oxides —É. G. Spiridonov, R. A. Khaikin, and L. P. Ravvina 743 798
Motion of a Drop of Alkali Metal in a Vapor Flow in the Presence of Condensation —G. B. Rybchinskaya and S. A. Kovalev 746 801
Investigation of Liquid-Metal Thermosensitive Elements—V. Ya. Prokhorenko, E. A. Ratushnyak, B. I. Stadnyk, V. I. Lakh, and A. M. Korsunskii 750 804
Investigation of an Asynchronous Flowmeter for Small Flows—N. A. Yalovega 753 806

REVIEWS AND BIBLIOGRAPHY
From the Editor 757 810
Letter to the Editor— Yu. Yu. Abramova and A. P. Naparotovich 757 810
Bibliography 760 813

Volume 7, Number 5 September-October, 1969

Calculating Properties of Partially Ionized Hydrogen by a Monte Carlo Method — E. V. Samuilov and V. P. Shevelev 763 817
Possibility of the Existence of a Supercooled Dense Plasma — L. M. Biberman and G. E. Norman 767 822
Bremsstrahlung of Electrons in a Field of Ar Atoms — V. M. Batenin and V. F. Chinnov . 776 832
Determination of the Profile of the Outlet Opening of a Plasma Ion Source — R. K. Ch'uang and L. I. Akin'shin 780 836
Probe Measurements in a Tenuous Plasma Jet —G. A. Luk'yanov and G. V. Petukhov 785 842
Dense Plasmas in a High-Pressure Pulsed Arc. I. Radiation from the Pulsed Arc —R. V. Mitin and V. P. Kantsedal 789 846
Stable State of Rarefied Plasma in a Q-Machine — A. V. Gurevich, R. A. Salimov, and N. S. Buchel'nikova 794 852
Parameters of Stationary Inductive Discharges at Atmospheric Pressure — E. S. Trekhov, A. F. Fomenko, and Yu. M. Khoshev 801 860
Application of the Thermoanemometer — Langmuir Probe for Diagnostics of Tenuous Plasmas —A. M. Khazen and V. A. Shuvalov 806 866
High-Temperature Thermodynamics of Uranium Carbides. I —S. S. Nikol'skii 812 873
Viscosity of Liquid Alkali Metals. I. Experimental Unit and Method of Investigation — É. É. Shpil'rain and V. A. Fomin 816 877
Investigation of the Viscosity of Dissociating Nitrogen Tetroxide by the Method of a Vibrating Disk —D. L. Timrot, M. A. Serednitskaya, and S. A. Traktueva 823 885

Thermal Conductivity of Titanium Nitride in the Homogeneity Range – M. I. Aivazov, A. Kh. Muranevich, and I. A. Domashnev 830 893
Thermophysical Properties of Liquid and Solid Tungsten, Copper, Aluminum, Tin, and Lead – B. M. Ivanov. 834 898
Relative Method of Correlation and Extrapolation of Experimental Data for Real Gases – V. I. Kudashev and L. S. Serdyuk 841 906
Transfer Coefficients of Dissociating Hydrogen – N. B. Vargaftik and Yu. D. Vasilevskaya 848 913
Physical Basis of Temperature Dependence of Viscosity and Thermal Conductivity of Rarefied Nonideal Gases – S. A. Ulybin. 852 918
Local Heat Transfer of Carbon Dioxide at Supercritical Pressure under Cooling Conditions – E. A. Krasnoshchekov, I. V. Kuraeva, and V. S. Protopopov. 856 922
Heat Transfer and Drag in a Circular Tube during the Laminar Flow of a Gas with Variable Properties. I. Method of Analysis – V. D. Vilenskii, B. S. Petukhov, and B. E. Kharin. 863 931
Hydrodynamics and Heat Transfer in Vertical Liquid Layers during Free Convection – A. G. Kirdyashkin and A. I. Leont'ev 871 940
Heat Transfer in the Turbulent Flow of Incompressible Fluid in an Axisymmetric Diffuser with Cooled Walls and Large Temperature Drop – P. N. Romanenko, A. K. Voskresenskii, and Yu. P. Semenov 876 946
Heat Fluxes to Electrodes and Erosion of Electrodes in a Quasi-Steady-State Plasma Accelerator of End-Face Type – A. M. Dorodnov, A. B. Ivashkin, N. P. Kozlov, N. N. Reshetnikov, and M. M. Chursin 881 951
Kinetic Analysis of Vaporization and Condensation Processes – T. M. Muratova and D. A. Labuntsov. 888 959
Heat Transfer in the Boundary Layer on a Plate with a Given Heat Flux or Wall Temperature Distribution after an Initial Unheated Section – N. M. Galin. 897 968
Quasi-One-Dimensional Analysis of Flow in the Channel of a MHD Generator – V. A. Bityurin and G. A. Lyubimov 903 974
Energy Method for Investigating Stability of Motion in Vapor-Generating Channels – E. P. Serov and L. T. Pashkov 915 987
Electro-Gas-Dynamic Compressor with Centralization of Space Charge – A. M. Borok . . . 919 991

REVIEWS
Devices for Simulating Heat-Transfer Conditions of Spacecraft – L. A. Novitskii. 925 997

BRIEF COMMUNICATIONS
Effect of Preliminary Ionization on Increase of Conductivity of Argon Plasma under the Effect of a Pulsed Electric Field – I. A. Vasil'eva and R. V. Kosova 936 1008
Luminescence Maximum in Spectral Lines during Plasma Decay – N. A. Kruzhilin and I. T. Yakubov 939 1010
Calculation of Oscillator Strengths of Upper Terms of Spectral Series – G. A. Kobzev and V. M. Sergeev. 941 1012
Determination of the Rate Constant of Associative Ionization of Nitrogen – G. D. Smekhov and S. A. Losev. 944 1015
Effect of an Increase of Positive Ions in the Plasma of a Hydrocarbon Flame with Additions of Certain Elements – V. I. Tverdokhlebov 947 1017
Device for Measuring the Phase Velocity of a Slow Electromagnetic Wave in a Plasma Waveguide – A. M. Egorov, V. P. Prishchepov, and A. F. Kivshik 949 1018
Products from the Electrical Explosion of Tungsten at Currents of $\sim 10^{11}$ A/m^2 – S. V. Lebedev, B. V. Lukin, A. E. Rautbort, and A. I. Savvatimskii. 951 1020

	Engl.	Russ.
Effect of a Transverse Magnetic Field on the Heat Flux to the Electrodes of a Sharply-Defined Discharge–A. E. Konovalov	563	615
Theory of the Cathode Mechanism of an Arc Discharge–I. I. Beilis and V. I. Rakhovskii	568	620
Investigation of the Effect of the Temperature of a Cooled Double Probe on the Electron Temperature Measured by it in Plasma at Atmospheric Pressure–M. I. Ashin, I. A. Vasil'eva, and A. P. Nefedov	574	626
Measurement of Plasma Flow Velocity with a Total Head Tube–A. A. Voropaev, S. V. Dresvin, and V. S. Klubnikin	580	633
Determination of the Limiting Values of Rotational Quantum Numbers–R. I. Artym and A. B. Matveev	587	641
The Virial Coefficients of Dissociating Hydrogen–A. M. Semenov	591	645
Determination of Various Thermal Properties of Combustion Products of Saratov Natural Gas at High Temperatures–V. N. Lanshov, G. P. Bazarov, and É. N. Kufa	598	652
Thermal Conductivity of Transparent Materials–A. G. Romashin	604	659
Experimental Determination of Emissive Power of Tungsten in the Visible Region of the Spectrum in the Temperature Range 1200-2600°K–L. N. Latyev, V. Ya. Chekhovskoi, and E. N. Shestakov	610	666
Combined Determination of Thermal Conductivity, Electrical Resistance, and Emissivity on a Single Short Specimen at Temperatures of More than 1000°C–A. V. Logunov and A. I. Kovalev	617	674
Thermal Conductivity and Electrical Resistivity of Certain Rhenium – Cobalt Alloys –P. I. Kirichenko	624	682
Temperature Fields and Effective Thermal Conductivity in a Cylindrical Layer of an Absorbing Medium–L. A. Pigal'skaya	628	687
Relation between the Bulk Expansion Coefficient and the Temperature Coefficient of the Compressibility–B. M. Drapkin	634	694
Solution of the Unsteady Gratz Problem–Yu. N. Kuznetsov	638	697
Heat Transfer in an Eccentric Circular Slot with an Internal Fuel Rod –V. D. Vilenskii and V. P. Smirnov	646	706
Transport of Aerosol Particles in a Nonisothermal Turbulent Stream –A. I. Leont'ev and E. A. Tsalko	654	715
Heating of a Fluid in Fine-Grained Porous Shells–V. N. Krymasov	662	723
Pseudoboiling of Carbon Dioxide in the Presence of Free Convection–É. N. Dubrovina, V. P. Skripov, and N. A. Shuravenko	671	730
Approximate Solution of the Stephan Problem with Time-Dependent Boundary Conditions of the First Kind–V. I. Antipov and V. V. Lebedev	676	736
Solution of Fundamental Formulation of Plane Problem of Radiative Heat Exchange in an Infinite Channel with Gray Walls–Yu. A. Surinov and O. P. Luk'yanenko	682	742
Angular Coefficients of Radiative Heat Transfer in Cylindrical and Annual Cavities –F. M. Vafin	686	746
Effect of Methods of Obtaining High Temperatures on the Thermal Efficiency of Open-Cycle MHD Devices–B. Ya. Shumyatskii, A. G. Sokol'skii, I. I, Pereletov, L. K. Khokhlov, A. P. Rogachev, and V. M. Koptev	694	754
Heat Tubes–Yu. V. Moskvin and Yu. N. Filinnov	704	766
New Instruments for Thermophysical Studies	714	776
BRIEF COMMUNICATIONS		
Laser Interferometry of a Partially-Ionized Plasma–L. N. Pyatnitskii and V. V. Korobkin	719	780
On the Volt-Ampere "Hall Voltage – Hall Current" Characteristic in Nonequilibrium and Inhomogeneous Plasma–D. M. Aberkova and G. S. Lopatskii	721	782

	Engl./Russ.	
Estimate of the Equilibrium Composition of Cesium Plasma – I. N. Sokolovskii	953	1021
Effect of High-Temperature Heating on the Thermoelectric Characteristics of Graphite and Titanium Carbide – P. S. Kislyi, L. S. Golubyak, L. V. D'yakonova, and O. V. Zaverukha	955	1023
Calculation of Thermodynamic Parameters of Liquids and Dense Gases with Allowance for Three-Particle Interaction Energy – A. L. Tsykalo	958	1026
Thermal Conductivity of Lead and Germanium Telluride – V. I. Fedorov and V. I. Machuev	960	1027
Determination of Emittance from the Surface of Tungsten – B. A. Konyaev	962	1029
Electrochemical Reactions in Solid Electrolytes Based on ZrO_2 at High Temperatures – Ya. P. Gokhstein and R. A. Khaikin	965	1031
Heat Transfer during Laminar Flow of Gas with Variable Physical Properties in the Hydrodynamic Initial Part of a Pipe – V. A. Kurganov	968	1034
Physical Aspects of Heat Transfer in the Flow of a Liquid with Phase Transitions through a Porous Wall – V. M. Polyaev and A. V. Sukhov	972	1037
Laser Measurement of the Velocity Distribution in a Film of Liquid – A. N. Amenitskii, B. S. Rinkevichyus, and V. A. Fabrikant	974	1039
Measurement of Heat Fluxes in an Electric Discharge Shock Tube – Yu. A. Polyakov and A. M. Maksimov	976	1041
Small-Dimension Cooled Magnetic Probes – V. Yu. Prikhodov	979	1044

Volume 7, Number 6 November-December, 1969

Determination of Plasma Temperature along the Axis of a Discharge Channel as a Function of Time of Discharge – A. Petrakiev, T. Vörös, I. Vishnevskii, F. Gentsvein, and M. Khegedyush	981	1049
Effect of Probe Temperature on Measurement of Electron Temperature at Medium and High Pressures by a Double Nonemitting Probe – I. A. Vasil'eva	985	1053
Measurement of Plasma Density in a Closed Metal System by the Use of UHF – D. K. Akulina and Yu. I. Nechaev	993	1061
Dense Plasma of High-Pressure Pulsed Arcs. II. Determination of the Plasma Parameters – R. V. Mitin and V. P. Kantsedal	997	1066
Absolute Values of the Apparent Cross Section for Calcium Ionization by Electron Collision – V. I. Rakhovskii and A. M. Stepanov	1001	1071
Nonlinear Plasma Relaxation Oscillations in Q Machine – A. V. Gurevich, R. A. Salimov, and N. S. Buchel'nikova	1004	1075
Optical Properties of Potassium Vapors at High Temperatures and Concentrations – V. E. Chertoprud	1009	1081
High-Temperature Thermodynamics of Uranium Carbides. II. Calculation of Uranium and Carbon Activities on the Basis of Storms' Data – S. S. Nikol'skii and I. N. Levina	1014	1087
Temperature Dependence and Velocity of the Congruent Evaporation of the Tantalum Carbide Phase – T. A. Nikol'skaya and R. G. Avarbé	1021	1095
Electrical Resistance of Sodium in the Condensed Phase up to 1300°K – V. A. Savchenko and É. É. Shpil'rain	1026	1101
Emission of Energy by Oxide Films on Metals – G. A. Zhorov and T. G. Pavlovskaya	1031	1107
Fixed Distance Acoustic Pulse Measurement of the Speed of Ultrasound in Gaseous and Vapor Media at High Temperatures – I. N. Vasil'ev and Yu. S. Trelin	1035	1112
Elements of Electrodynamics of Unipolar Gas Flows – V. A. Zykov	1039	1117
Stability of a Plane Shock Wave Front at Small Magnetic Reynolds Numbers – O. A. Sinkevich	1047	1126

	Engl.	Russ.
Investigation of Turbulent Heat Transfer under Nonisothermal Conditions in the Entrance Region of a Porous Tube – A. I. Leont'ev, B. P. Mironov, and A. V. Fafurin	1054	1134
An Approximate Method for the Experimental Determination of Local Heat Transfer Coefficients – E. A. Krasnoshchekov, V. S. Protopopov, A. T. Igamberdyev, and V. S. Grigor'ev	1061	1141
Influence of Motion on Evaporation and Condensation – D. A. Labuntsov and T. M. Muratova	1065	1146
Heat Transfer during Condensation of a Dissociated Nitrogen Tetroxide Vapor on the Surface of a Horizontal Tube – S. A. Kovalev, A. S. Komendantsov, and V. S. Petukhov	1070	1151
Deposition of Potassium Carbonates in the Flow of the Combustion Products of Fuels Containing Sulfur – M. A. Styrikovich, I. L. Mostinskii, and M. A. Laricheva	1073	1155
Theory of a Light Pipe Radiation Pyrometer – S. M. Dukarskii	1077	1160
Cesium Vapor Shock Tube – A. A. Suslov, K. I. Seryakov, and L. V. Gurvich	1084	1168
Present State of Work Conducted by the French Atomic Energy Commission Pertaining to Magnetohydrodynamic Conversion – J. P. Azalbert, R. Scaricabarozzi, C. Vavasseur, and P. Zettwoog	1092	1178
II. Results of Experimental Study of Hall MHD Generator – J. P. Jacquemin, C. Vavasseur, and P. Zettwoog	1101	1188
Engineering-Economic Characteristics of a Superconducting Magnetic System for a Magnetohydrodynamic Generator – G. I. Rossievskii, V. S. Goncharova, and I. A. Kir'enin	1105	1192
BRIEF COMMUNICATIONS		
Use of Holography to Study Discharges in Pulsed Light Sources – V. A. Nikashin, G. I. Rukman, V. K. Sakharov, and V. K. Tarasov	1111	1198
Stabilized Arc with Longitudinal Optical Aperture – G. V. Krivenkov	1114	1200
Certain Parameters of a Stationary Accelerator in Crossed Fields at an Intermediate Pressure – V. F. Konakh	1116	1201
Measurement of the Temperature of Dense Xenon Plasma Using Two Independent Methods – A. A. Bakeev, R. E. Rovinskii, and I. P. Shirokova	1119	1203
Spectral Distribution of Radiant Losses in Pulsed Plasma Accelerators – V. A. Derevshchikov and A. I. Struchkov	1122	1205
Effect of Argon on the Output Thermionic Characteristics of a Cesium Diode with Molybdenum Cathodes – A. T. Semenchenkov, A. N. Kobylkin, and O. S. Ivanov	1125	1208
Kinetics of the Dissociation of the Carbon Dioxide Molecule – I. I. Galaktionov and T. D. Korovkina	1128	1211
Thermodynamic Functions of the Gaseous Scandium, Yttrium, and Lantanum Halides at 293.15-3000°K – K. S. Krasnov and T. G. Danilova	1131	1213
Interrelationship between Temperature Coefficients of the Thermophysical, Electrophysical, and Elastic Properties of Metals and Alloys – V. S. Batalov	1134	1216
Thermal Conductivity of Silver Sulfide at High Temperatures Including the Liquid Phase – A. A. Aivazov, A. S. Okhotin, and V. M. Glazov	1137	1218
Experimental Data on the Speed of Sound in Lithium up to 1100°K – I. I. Novikov, Yu. S. Trelin, and T. A. Tsyganova	1140	1220
Generalization of Experimental Data on Unsteady Convective Heat Transfer with Changing Heat Flux – G. A. Dreitser, V. G. Izosimov, and E. K. Kalinin	1142	1222
Effect of Temperature Factor on Local Heat Transfer during the Flow of a Gas and Graphite Particle Mixture in a Pipe – F. F. Tsvetkov, A. S. Sukomel, and R. V. Kerimov	1145	1224
Profiles of Velocity and Hydraulic Resistance in Turbulent Flow in a Tube, in a Longitudinal Magnetic Field – V. V. Duganov and D. S. Kovner	1148	1227

INDEX

Author Index, Volume 7, Numbers 1-6, 1969 1155
Tables of Contents, Volume 7, Numbers 1-6, 1969 1159